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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/537,605

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Bruce P. Swaybill

60,469-219;OT-5094

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7590

01/19/2007

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EXAMINER

KRUER, STEFAN

ART UNIT

PAPER NUMBER

3654

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
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3 MONTHS

01/19/2007

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

# Office Action Summary

Application No.

10/537,605

Applicant(s)

SWAYBILL ET AL.

Examiner

Stefan Krueer

Art Unit

3654

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED. (35 U.S.C. § 133).

Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 10 November 2006.
- 2a) ☒ This action is FINAL. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1 - 25 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 22 is/are allowed.
- 6) ☒ Claim(s) 1 - 4, 6, 8 - 11, 14 - 18, 20 - 21 and 23 - 24 is/are rejected.
- 7) ☒ Claim(s) 5, 7, 12 - 13, 19 and 25 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 03 June 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO/SB/08)
- Paper No(s)/Mail Date \_\_\_\_\_

- 4) ☐ Interview Summary (PTO-413)
- Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

## DETAILED ACTION

### *Claim Objections*

**Claims 1 - 15** are objected to because of the following informalities: "machine roomless" should be written as "machine-roomless" or, preferably, "having no machine room" or "without a machine room".

**Claim 24** is objected to for failing to designate the claim as "(New)".

Appropriate corrections are required.

### *Claim Rejections - 35 USC § 103*

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

**Claims 1 – 2 and 6** are rejected under 35 U.S.C. 103(a) as being unpatentable over Salmon et al (4,807,723) in view of Bauer (US 2002/0185338).

**Re: Claims 1 and 2**, Salmon et al disclose:

- a machine supporting portion (top, center of 14) securing a machine in a selected position in a hoistway (referenced, Col. 2, Line 19).
- and a sheave supporting portion (top, end of 14) to support at least one sheave;

however, Salmon et al are silent regarding a plurality of termination members.

Attention is directed to Bauer who teaches first (17, Fig. 1) and second termination members (19, Fig. 2) having respective first and second termination-supporting portions, wherein his first terminating supporting portion forms a single structure with his machine supporting portion, sheave and termination members, said single structure is located inside the hoistway, and one of said termination members (19) is associated with an elevator cab (5) and the other (17) with a counterweight (7).

It would have been obvious to one of ordinary skill in the art to modify the reference of Salmon et al with the teaching of Bauer to integrate a termination in the machine-supporting portion as typical of conventional rope suspension systems.

In reference to the claim language referring to a support device for a machine-roomless elevator system, intended use and other types of functional language must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the claim. In a claim drawn to a process of making, the intended use must result in a manipulative difference as compared to the prior art. In re Casey, 152 USPQ 235 (CCPA 1967); In re Otto, 136 USPQ 458, 459 (CCPA 1963).

**Re: Claim 6**, Salmon et al disclose their machine- and sheave-supporting portions as comprising two lateral beam members (14).

**Claims 3 and 8 – 9** are rejected under 35 U.S.C. 103(a) as being unpatentable over Salmon et al in view of Bauer, as applied to Claim 1, and in further view of de Jong et al (5,361,873).

**Re: Claim 3**, Salmon et al and Bauer disclose a single sheave-supporting portion.

Attention is directed to de Jong et al who their first and second sheave supporting portions to accommodate additional tensioning for maintaining alignment of suspension ropes within the sheave grooves as well as their displacement.

It would have been obvious to one of ordinary skill in the art to modify the reference of Salmon et al and Bauer with the teaching of de Jong et al to provide additional aligning means of suspension ropes for flexibility of installation and smoother operation.

**Re: Claims 8 and 9,** Salmon et al disclose a mounting member near each end of the lateral beam members.

Bauer discloses his mounting member(s) (15.2) in combination with a "... frame (15.1) made of sections... " whereby his mounting member(s) is "... fastened to... rails..." (Para. 0017) that carry a load of the device and associated elevator system components; however, Bauer is silent regarding the details of his frame.

Attention is directed to de Jong et al who teach their device including:

- two spaced lateral beam members (right-left, Fig. 4),
- at least one transverse beam (Fig. 5) extending between and secured to the lateral beam members near each end of the beam members,
- mounting members near each end of each lateral beam member (Fig. 4),
- said mounting members securing the device to a structure that carries a load of the device.
- And a plurality of vertical brace members (raised portions, Fig. 4) connected to each of the mounting members;

It would have been obvious to one of ordinary skill in the art to modify the reference of Salmon et al and Bauer with the teaching of de Jong et al to provide an appropriately constructed and secured support-framing structure.

**Claims 10 – 11, 14 – 18 and 20** are rejected under 35 U.S.C. 103(a) as being unpatentable over Salmon et al in view of Bauer and in further view of Orrman et al (US 2002/0017434).

**Re: Claim 10,** Salmon et al disclose:

- a machine having a motor and a drive sheave inside a hoistway (Col. 2, Line 19),
- an idler sheave (16) inside a hoistway,
- an elevator cab ("car"),
- a counterweight ("C.W.")

- a plurality of elongated load bearing members (20) associated with the cab and counterweight, said load bearing members being moveable about the drive sheave and idler sheave in response to operation of the machine;
- a single support device in the hoistway that secures the machine and sheave in a desired position in the hoistway relative to the cab and counterweight;

however, Salmon et al are silent regarding terminating members and their support.

Bauer teaches a plurality of terminations (17, 19) associated with ends of his load bearing members; however, Bauer teaches multiple support devices.

Attention is directed to Orrman et al who teach their terminations (10, 11) associated with the ends of their load bearing members (9), their terminations fixed to a common support device that secures the machine and terminations in a desired position inside the hoistway relative to their cab (2) and counterweight (4) as a "...compact package... suited for... modernization projects... and (sic) an elevator without a machine room..." (Para. 0011).

It would have been obvious to one of ordinary skill in the art to modify the reference of Salmon and Bauer with the teaching of Orrman et al to provide a single support device for the machine, sheave and termination as a compact arrangement suitable for elevators without a machine room.

**Re: Claim 11**, Salmon et al disclose their support device includes two lateral beam members to support the machine and sheave.

**Re: Claim 14**, Salmon et al disclose their support comprise a plurality of metal beam members.

**Re: Claim 15**, Salmon et al disclose their idler sheave and drive oriented to each other so that the elongated load bearing members deflect vertically, deflect about the idler sheave in a generally horizontal direction and then are wrapped at least 180° around the drive sheave.

**Re: Claim 16**, Salmon et al disclose their idler sheave and drive rotating about non-parallel axes and Bauer is silent regarding an idler sheave.

Attention is directed to Orrman et al who teach their idler and drive sheaves rotating about parallel axes (7, 6, Fig. 2 and Para. 0030) for benefit of improved service lift of their elongated load bearing members without compromising friction between the traction sheave and the said members (Para. 0031).

It would have been obvious to one of ordinary skill in the art to modify the references of Salmon et al and Bauer with the teaching of Orrman et al to orient the axes of the idler and drive sheaves to one another such that they are parallel to gain the commercial benefits of increased uptime and reduced maintenance without compromising performance.

**Re: Claims 17 – 18 and 20**, the device of Claims 1 – 16 would necessarily have to be assembled and installed in order to function. It would have been obvious to perform all the method steps of claims 17 – 18 and 20 when producing the device of Salmon et al as modified by Bauer and de Jong et al or Orrman et al above, in a usual and expected fashion, in as much as the method claims recite no limiting steps beyond mounting each of the components.

**Claims 21 and 23 – 24** are rejected under 35 U.S.C. 103(a) as being unpatentable over Salmon et al in view of de Jong et al and in further view of Wagatsuma et al (6,234,276).

**Re: Claims 21 and 23**, Salmon et al disclose:

- a machine-supporting portion (top, center of 14) securing a machine in a selected position,
- and a sheave supporting portion (top, end of 14) to support at least one sheave;
- the machine-supporting portion and the sheave-supporting portion comprise two lateral beam members (14) that are spaced from each other;

however, Salmon et al are silent regarding a terminating supporting portion and a second sheave supporting portion.

De Jong et al teach their second sheave-supporting portion and their at least one transverse member (lower, Fig. 5) extending between and secured to their lateral beam members (right, left, Fig. 4), wherein the second sheave supporting portion and at least one transverse member are secured together with said sheave- and machine-supporting portions to form a single structure; however, de Jong et al are silent regarding a plurality of termination members.

Attention is directed to Wagatsuma et al, who teach first and second termination members (106, Fig. 1) and first and second termination-supporting portions secured to a machine beam as known in the art (Col. 1, Line 29).

It would have been obvious to one of ordinary skill in the art to modify the reference of Salmon et al and de Jong et al with the teaching of Wagatsuma et al to utilize a conventional means to support single or multiple terminating members.

**Re: Claim 24,** Salmon et al disclose:

- a machine having a motor and a drive sheave inside a hoistway (Col. 2, Line 19),
- an idler sheave (16) inside a hoistway,
- an elevator cab ("car"),
- a counterweight ("C.W.")
- a plurality of elongated load bearing members (20) associated with the cab and counterweight, said load bearing members being moveable about the drive sheave and idler sheave in response to operation of the machine;
- a single support device in the hoistway that secures the machine and sheave in a desired position in the hoistway relative to the cab and counterweight;

however, Salmon et al are silent regarding terminating members and at least one transverse member extending between and secured to the lateral beam members (14).

Attention is directed to de Jong et al who teach a transverse member (lower beam, Fig. 4) extending between and secured to the lateral beam members (left, right); however, de Jong et al are silent regarding terminations.



Attention is directed to Wagatsuma et al, who teach first and second termination members (106, Fig. 1) and first and second termination-supporting portions secured to a machine beam as known in the art (Col. 1, Line 29).

It would have been obvious to one of ordinary skill in the art to modify the reference of Salmon et al and de Jong et al with the teaching of Wagatsuma et al to utilize a conventional means to support single or multiple terminating members.

***Allowable Subject Matter***

**Claim 22** is allowed.

**Claims 5, 7 and 12 – 13, 19 and 25** are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter:

**Claims 7 and 12** contain allowable subject matter because the teachings of the prior art of record taken as a whole do not show or render obvious the combination set forth including "...at least one transverse member extending between and secured to the lateral beam members..."

**Claims 19 and 25** contain allowable subject matter because the teachings of the prior art of record taken as a whole do not show or render obvious the combination set forth including "...then subsequently raising the support device and positioning it in a second selected position in the hoistway."

**Claims 5 and 22** contains allowable subject matter because the teachings of the prior art of record taken as a whole do not show or render obvious the combination set forth including "...the supporting portions each comprising a plurality of metal sheets secured together."

***Response to Arguments***

Applicant's arguments filed 31 October 2006 have been fully considered but they are not persuasive.

Applicant is correct in the statement that Claim 20, in lieu of Claim 19, was inadvertently objected to as having allowable subject matter that was depending from a rejected claim, in that Claim 20 had been rejected in conjunction with Claims 17 and 18 as being unpatentable over Salmon et al in view of Wagatsuma et al, as applied to Claim 1, and in further view of de Jong et al.

Salmon et al discloses their "...motor 10 mounted on a rather straightforward frame arrangement to a pair of beams 14 which span the elevator shaft above the car and counterweight C.W." (Col. 2, Line 15) and though he is silent as to such an arrangement comprising a "machine room", they disclose the spirit of the arrangement of the instant invention as detailed and depicted in Figures 1 – 2 and 5 – 6, wherein these are stated as depicting a machine-roomless arrangement. Notably, the figures depict a machine-supporting portion spanning the region above the elevator car and counterweight and secured to the opposing walls of the hoistway – in keeping with the aforementioned passage from the disclosure of Salmon et al.

With respect to the reference of Wagatsuma et al, Figure 1 depicts an arrangement of conventional elevator systems whereby the terminating supporting portion secures a plurality of termination members in keeping with the original claim language.

With respect to the second diverter sheave of de Jong et al, de Jong et al review the alignment (angle) of the load bearing members with the travel of the elevator car, whereby the positioning of the machine-supporting portion is limited as well.

***Conclusion***

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP

§ 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Morris et al (4,537,286), Bloch et al (2004/00159501) and Heikkinen (5,076,398) are cited for reference of a support device having a large plurality of termination members suspended from *termination-support members mounted on either overhead-, machine- or overhead beams*, a support device for an elevator system wherein the supporting portion comprises one metal sheet from a cross member extends for in-part support of a tension member, and an elevator system comprising the a single support device for a motor, drive and idler sheaves, wherein the wrap angle about the drive sheave is greater than 180°.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Stefan Kruer whose telephone number is 571.272.5913. The examiner can normally be reached on M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kathy Matecki can be reached on 571.272.6951. The fax phone number for the organization where this application or proceeding is assigned is 571.273.8300.

Art Unit: 3654

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866.217.9197 (toll-free)

SHK

16 January 2006

  
GENE O. CRAWFORD  
SUPERVISORY PATENT EXAMINER